AGRICULTURAL ECONOMICS RESEARCH UNIT

Lincoln College

FRESH VEGETABLE RETAILING IN NEW ZEALAND: AN ECONOMIC SURVEY

by

G. W. KITSON

Research Report No. 50

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THE AGRICULTURAL ECONOMICS RESEARCH UNIT

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G. W. Kitson

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PREFACE

In this report we give the results of a preliminary survey of fresh vegetable retailing in New Zealand. The report is largely a verbal summary of the relevant results indicated by more detailed analysis. The research involved was carried out by Mr Graham Kitson, and the project was financed by the New Zealand Vegetable and Produce Growers' Federation. Dr R.W.M. Johnson provided guidance in the formulation and analysis of the research, and the writing up of this report.

The survey covered a number of general questions relating to vegetable retailing, but special attention was paid to the size of retail marketing margins, the cost of retailing, and to the differences in retail marketing costs between different types of outlets. These aspects of market research are of major importance to all persons interested in fruit and vegetable marketing operations, and this report makes an original contribution to this subject.

But an ancillary benefit is the experience gained by the Research Unit in the general field of market research, for which there is a great need in New Zealand, and in which the Unit is deeply interested.

The research, reported on here, has uncovered a number of retail marketing problems which are worthy of further intensive investigation, and this is now proceeding with a further grant from the Vegetable Producers' Federation and the Fruitgrowers' Federation.

We are deeply grateful to these Federations for their support and interest in this work and for their general enlightened attitude as sponsors of economic research.

We must also express our appreciation to the large number of retailers in Christchurch, Auckland, Taumaranui and Taihape, who were most co-operative in providing information. It is to be hoped that this report will serve as a useful guide to certain aspects of their commercial operations.

B. P. Philpott

Lincoln College,
13 August 1968

FRESH VEGETABLE RETAILING IN NEW ZEALAND - AN ECONOMIC SURVEY

1. INTRODUCTION

A good deal of interest has been shown in the marketing of vegetables over recent years particularly with reference to marketing margins. This survey is a study of such margins for different groups of retailers for two widely differing main centres in New Zealand. Two smaller North Island centres (Taumaranui and Taihape) were also surveyed but results for these centres were of less significance on national terms. Not only were the margins themselves under study but also factors which were considered likely to affect them. Factors relevant to a description of general retailing practices but not clearly associated with retail margins were also studied and are described.

A questionnaire was designed to gather information on the following broad topics:

Frequency of getting supplies of vegetables.
Range of vegetables stocked.
Markup procedure and margins.
Costs involved in retailing vegetables.
"Specialling" policies for vegetables.
Competition between retailers.
Display and presentation of vegetables.

Six vegetables were studied in detail. These were carrots, celery, cabbage, tomatoes, lettuce and onions. These were selected to get a range of perishability of products.

The questionnaire was designed and tested with a number of people concerned with the marketing of vegetables in Christchurch whose co-operation is greatly appreciated. Gratitude must also be expressed to retailers visited in the survey who uncomplainingly gave up time to answer questions contained in a lengthy questionnaire.

After a series of tests to the questionnaire, and subsequent amendments before and after the Christchurch survey in August, interviews were made in Auckland, Taumaranui and Taihape during October and November 1967.

2. METHODOLOGY

Although Christchurch was selected for a pilot survey the results from this centre were found significant enough to constitute something more than a pilot survey, and they serve as a useful comparison with results from the North Island centres.

Auckland was selected for two main reasons:

(i) It represents a large portion of the New Zealand population and its inclusion was vital for any results to have national significance.

(ii) It was felt that trends and/or technical innovations in vegetable retailing were more likely to begin in Auckland than any other centre in New Zealand and Auckland could serve better as a guide to future retailing practices in other parts of the country.

Taumaranui and Taihape were the two Central North Island centres selected. The reason for the choice of these centres was that both were distant from any auction centres and as such, retailing practices and problems were likely to be rather different there, and some idea of the variation in retail practices with size of centre was likely to be gained.

The size of the sample in Christchurch and Auckland was determined partly by cost and partly to get sufficient numbers in the sample to render the results significant. In Christchurch a list of retailers was compiled with the help of auction firms, and "semi-wholesalers," who bought for groups of retailers. The list was divided into four sub-groups and with the help of the auction firms once again, the value of the purchases for each sub-group during May 1967 was recorded. These values were used as the basis for selecting the number in each group which would be included in the sample. The total sample size considered adequate was fifty-one. The sub-groups, the number in each, the value of May auction floor purchases for each, and the numbers of each in the final sample, are shown in Table 1.

May auction floor purchases were used because this was the most recently completed month at the time the list of retailers was being compiled. It was also felt that the proportions bought from wholesalers by different retail outlets would not change greatly from month to month.

TABLE 1

RELATIVE IMPORTANCE OF DIFFERENT RETAIL OUTLETS IN CHRISTCHURCH

Group	Total Number	May Purchases (at Auction) $	Percentages of May Purchases	Number in Sample
Supermarkets & Variety Stores	29	69,142	22	12
Dairies, grocers etc.	461	141,042	47	22
Fruiterers/ greengrocers	84	71,550	25	14
Super fruit & veg.retailers	5	16,778	6	3
Totals	579	298,412	100	51

The group described as super fruit and vegetable retailers requires some explanation. These were retailers who handled fruit and vegetables in large volume, compared with fruiterers as such, and who specialised in case lot sales and generally had simpler, though larger, display facilities than other groups. Fruit and vegetables constitute the complete turnover of these outlets compared with supermarkets where fruit and vegetable retailing is only one department in a wider retailing operation. This group was not considered separately in Auckland.

The method of compiling the list of retailers in Auckland was simpler than was the case for Christchurch. Here fruit and vegetable retailers are licensed with Local Authorities under Health Regulations. Twenty three Local Authorities provided lists of fruit and vegetable retailers in their areas. These were put into groups partly from the lists themselves and partly by use of various directories. The numbers selected from each group were decided once again on the basis of wholesale purchases. However, in this case, the purchases were provided in percentage terms only and from one wholesale firm only (the largest in Auckland). For a total sample size of 76, the numbers in each group for the sample, the percentages of auction floor purchases by each group, and the number of each group in the Auckland Urban Area, are shown below (Table 2).

TABLE 2

RELATIVE IMPORTANCE OF DIFFERENT RETAIL OUTLETS IN AUCKLAND

Group	Total Number	Percentages of Purchases	Number in Sample
Supermarkets & Variety Stores	54	26	20
Dairies, grocers, etc.	370	21	16
Fruiterers/greengrocers	324	53	40
Totals	748	100	76

The percentage of retailers included in the samples in both Christchurch and Auckland was about ten. However, the smaller number of retailers in Tauramanui and Taihape meant that for significant results to be obtained much higher percentage samples had to be taken. In Taumaranui eight interviews were made, this being a 73% sample and in Taihape six interviews were made, a 75% sample.

3. SOME KEY STATISTICS

A few basic differences between Christchurch and Auckland are at once evident by comparing Tables 1 and 2. In Christchurch the grocer group purchased 47% of the total and fruiterers 25%, while in Auckland these figures were almost reversed, being 21% and 53% respectively. The percentages of total purchases for supermarkets were somewhat similar for both Christchurch and Auckland. This should be compared with Table 3 which shows, from survey data, the average weekly turnovers of different retail outlets, the percentage this forms of total turnover for each outlet, and similar figures for the areas devoted to display, for both Christchurch and Auckland.

TABLE 3

WEEKLY TURNOVER AND DISPLAY AREAS OF DIFFERENT RETAIL OUTLETS

	Christchurch				Auckland			
Group	Ave.Wkly Turnover		Ave.Display Area		Ave.Wkly Turnover		Ave.Display Area	
	$	%	ft^2	%	$	%	ft^2	%
Supermarkets	515	9.5	370	6.8	1185	11.4	613	13.7
Grocers	127	16.0	76	10.8	124	8.9	57	5.9
Fruiterers	340	45.0	218	37.5	518	99.0	410	98.0
Super f & v	820	98.0	1179	100.0				
Central N.I.					451	24.6	-	-

Table 3 shows that Christchurch fruiterers had an average weekly turnover of $340 in fruit and vegetables and that this constituted only 45% of their total weekly turnovers. Auckland fruiterers on the other hand were almost solely concerned with fruit and vegetable sales and their fruit and vegetable turnover (average weekly) were almost $200 greater than Christchurch. The weekly turnover figures for grocers were somewhat similar in both centres (about $120) but in Christchurch this constituted a greater percentage of total turnover and here slightly greater areas were devoted to display.

Auckland's supermarkets' average weekly fruit and vegetable turnovers were more than double those of Christchurch as were the areas devoted to fruit and vegetable display, although total supermarket area was roughly similar for each centre.

The turnover figures quoted here should be interpreted with some caution, remembering that the Christchurch figures applied to May and the Auckland figures to October-November. The Christchurch figures would then tend to be understated by comparison with Auckland. Nevertheless it is apparent that in Christchurch the bulk of the fruit and vegetable retailing business is done by shops with low fruit and vegetable turnovers by comparison with Auckland. A quick calculation on the basis of the number of retail outlets in either centre shows that in Auckland there is one fruit and vegetable retail outlet for every 602 persons and in Christchurch the figure is one outlet for every 519 persons.

Thus Christchurch has a large number of low turnover fruit and vegetable retail outlets by comparison with Auckland.

4. IDENTIFICATION QUESTIONS

All retailers in the survey were asked questions on locality, ethnic group, distance to auction centre, class of ownership, experience in retailing, and trading hours. The answers to most of these questions were only significant with respect to other questions, but some questions are interesting in their own right.

The average of the number of years' experience in fruit and vegetable retailing by proprietors, or managers of fruit and vegetable departments in supermarkets, was 15 years for Auckland fruiterers and only nine years for Christchurch fruiterers, 11.5 years for Auckland grocers and 8.4 years for Christchurch grocers and 18 years for Auckland supermarkets and 16 years for Christchurch supermarkets. Thus all retailing outlets in Auckland had higher average numbers of years' experience in retailing, the difference being most pronounced for fruiterers. This could be looked at another way by saying that from this evidence fruit and vegetable retailers in Auckland tend to stay in the retailing business longer than those in Christchurch.

For fruiterers and the grocer-dairy group this may be partially explained by the difference in trading hours between the two centres. The averages here were 66 and 56 hours per week for fruiterers and grocers respectively, in Christchurch, as compared with 56 and 51 for Auckland. This is consistent with what might be expected, that longer trading hours will result in a shorter stay in the business. The differences here were largely because of the Sunday trading by Christchurch fruiterers and grocer/dairies whose turnovers were substantially items other than fresh fruit and vegetables.

A point of definition should be examined here. This concerns the definition of fruiterers in particular. As no prior knowledge existed of the importance of fruit and vegetables in total turnover, the approach taken was to classify people according to what sort of business they considered they had. This was done by checking against directories. The main reason for taking this approach was that classifications would be similar to those of the N.Z. Department of Statistics who actually ask retailers what class they feel their businesses belong to. It is evident for Christchurch that a good many people for whom fruit and vegetables was not a very high portion of total turnover still considered themselves fruiterers. By comparison all of Auckland's fruiterers had turnovers which were greater than 90% fruit and vegetables although two of these had associated with them grocer shops owned by the same person, but run as separate businesses. Taumaranui's fruiterers were similar to those in Auckland but fruiterers in Taihape were much more diverse in nature. It is possible then that fruiterers tend to diversify in range of produce sold from the North of New Zealand to the South.

5. RANGE OF VEGETABLES STOCKED

A list of 27 vegetables was shown to retailers who were asked which of these they always stocked, which they did not always stock, and which they never stocked.

From the answers given to these questions it was evident that supermarkets in both Christchurch and Auckland and the small super fruit and vegetable retailer group in Christchurch stock vegetables more consistently than other groups, although fruiterers in both centres appear to stock only slightly less consistently the range of vegetables covered. The grocer dairy group for both centres went without vegetables sometimes, or never stocked them, more often than other groups, while the Central North Island retailers (which included some grocers) stocked the range of vegetables less consistently than supermarkets and fruiterers in either centre, but more consistently than grocers.

The differences between comparable groups from either centre were not significant. However, because the bulk of the trade in Christchurch is done by the grocer dairy group it is evident that Christchurch consumers in general are more likely not to be able to get supplies of particular vegetables on occasions, or have a poorer selection to choose from than Auckland consumers.

Table 4 compares the general order of consistency of stocking the major vegetables for both centres.

The two centres are in general agreement until we get to tomatoes which in Auckland are stocked sixth most consistently, and in Christchurch only ninth most consistently. Other vegetables whose rank varies considerably between centres are; beetroot and cucumbers which are ranked more important in Auckland than in Christchurch, and swedes and brussels sprouts which are ranked more important in Christchurch than in Auckland. The vegetables which Auckland retailers rank significantly higher are all associated with salads, and those which Christchurch retailers rank higher are more associated with hot meals.

TABLE 4

CONSISTENCY OF STOCKING DIFFERENT VEGETABLES

Vegetable	Order of Consistency of Stocking: Auckland	Order of Consistency of Stocking: Christchurch
Potatoes	1	1
Onions	2	2
Carrots	3	3
Cabbage	4	6
Pumpkins	5	4
Tomatoes	6	9
Parsnips	7	7
Beetroot	8	20
Silver beet	9	11
Kumera	10	12
Cauliflower	11	8
Lettuce	12	13
Cucumber	13	22
Turnips (inc.swedes)	14	5
Brussels sprouts	15	10
Sweetcorn	16	19
Celery	17	15
Asparagus	18	17

6. SOURCES OF SUPPLY

Table 5 shows the numbers of retailers from each group in each centre who use the listed supply sources for any of the six survey vegetables.

Auckland supermarkets bought direct from the grower much more than any other group, and they bought personally at auction less than any other group, except grocers, while Christchurch supermarkets used this latter source more than any other. Auckland supermarkets used commission buyers more significantly than their Christchurch counterparts. Both Auckland and Christchurch supermarkets used "other" sources (mainly produce merchants and Country Orders) fairly frequently and Christchurch supermarkets tended to stick to the same source of supply for all vegetables in the survey, much more frequently than Auckland supermarkets.

Both Christchurch and Auckland fruiterers bought predominantly at auction although Auckland fruiterers used commission buyers more than Christchurch fruiterers. Commission buyers were the most popular source of supply for both Christchurch and Auckland grocers, Auckland grocers generally buying from one source only. Central North Island retailers used methods other than those listed most frequently. These methods included Country Orders mainly, with relatives and friends at auction, or a Country Orders truck also being very popular.

Retailers in Taumaranui and Taihape used a number of alternative centres to get supplies from, the most popular centres being Auckland, Palmerston North, Wanganui and Hastings (for fruit). Hamilton, the closest auction centre

TABLE 5

SOURCES OF VEGETABLE SUPPLIES

Source	Supermarkets		Fruiterers		Grocers		Central N.I.	Super F&V ChCh
	Auck.	ChCh	Auck.	ChCh	Auck.	ChCh		
1.Growers direct	14	1	3	2	2	3	3	1
2.Auction attendance	4	8	27	13	1	7	2	3
3.Commission buyer or semi-wholesaler	5	1	8	1	8	12	3	-
4.Supply Company	2	-	2	-	5	3	-	-
5.Other	8	3	2	2	3	3	11	-
Total sources	33	13	42	18	19	28	19	4
Duplicated sources	13	1	2	4	3	6	5	1
Total outlets	20	12	40	14	16	22	14	3

to Taumaranui was not popular and it was claimed that produce from Hamilton was poorer in quality and that service was unreliable and inefficient.

It should be noted that questions on sources of supply were asked for the six survey vegetables only (carrots, celery, cabbage, tomatoes, lettuce, onions) and the results above could have been slightly different if a wider range of vegetables had been considered. The pattern for each of the six vegetables did not vary greatly apart from carrots and cabbage which were the major vegetables bought directly from the grower by Auckland supermarkets.

A good deal of interest must lie in the extent of purchases direct from the grower, and the extent to which commission buyers are used. Both of these methods have been regarded as a threat to the auction system, grower purchases avoiding the auction system completely and the use of commission buyers reducing the number of buyers on the auction floor and presumably reducing competition at the same time. From the survey results only Auckland supermarkets have made any great impact in direct buying among these six surveyed vegetables. Also numbers who said they preferred the grower were somewhat similar to those used in Table 5, who used the grower, for all groups. This would tend to indicate that no great preference exists for direct purchases. However, it is significant that the Auckland supermarkets find it worthwhile to buy direct from one large scale producer when overseas fruit quotas would tend to discourage avoidance of the auction system. It has been suggested that supplies of overseas fruit are easier to acquire in Auckland than in Christchurch however, and if this were so it may help explain why direct grower purchases are more frequent in Auckland than Christchurch.

Commission buyers are used significantly by Auckland supermarkets and fruiterers. This would indicate that some advantage accrues from this. The major reason given for using commission buyers was a saving of time, giving a consequent reduction in costs. In Christchurch commission buyers were used mainly by small, low turnover retail outlets. This was in direct contrast with Auckland where substantial supermarkets and fruiterers used commission buyers despite the fact that it must have been more worthwhile for them (than smaller retail outlets), to organise their own purchases, and it is likely that they benefit from the collective buying power they give to their commission buyer (who was the same buyer for most of these outlets).

7. BUYING FREQUENCY

Table 6 shows the average number of days per week on which different outlets in the different centres normally get new supplies of each of the six survey vegetables. It should be noted that Christchurch and North Island results are not strictly comparable because of seasonal differences. Results for Christchurch apply to August and those for Auckland to October-November.

In Christchurch the super fruit and vegetable retailers bought supplies of all vegetables, except onions, most frequently. Supermarkets bought next most frequently, followed by fruiterers and finally grocers. In Christchurch, the major retail outlet (grocers) bought in fresh supplies less frequently than any other group.

TABLE 6

FREQUENCY OF PURCHASING FRESH SUPPLIES IN AVERAGE DAYS PER WEEK

Vegetable	Supermarkets		Fruiterers		Grocers		Central N.I.	Super F&V ChCh
	Auck.	ChCh	Auck.	ChCh	Auck.	ChCh		
Carrots	3.1	2.5	2.3	2.4	2.1	1.1	1.6	3.3
Celery	3.0	3.3	1.9	2.6	1.9	2.2	1.5	4.0
Cabbage	3.6	3.6	2.8	3.2	2.8	2.6	2.0	4.0
Tomatoes	2.9	3.2	3.1	2.4	2.5	1.6	1.8	3.3
Lettuce	3.6	3.1	3.1	3.5	2.5	2.7	2.2	4.7
Onions	1.6	2.2	1.4	1.0	1.2	1.0	1.0	0.8

TABLE 7

NUMBER OF RETAILERS WITH OWN COOL STORAGE

	Supermarkets		Fruiterers		Grocers		Central N.I.	Super F&V ChCh
	Auck.	ChCh	Auck.	ChCh	Auck.	ChCh		
Own Store	18	10	11	2	3	1	7	2
Total	20	12	40	14	16	22	14	3

In Auckland fruiterers bought in supplies only slightly more frequently than grocers and both were a long way behind supermarkets. It is notable that Auckland grocers bought cabbage, which is probably the vegetable with the smallest seasonal demand in October, more frequently than their Christchurch counterparts bought cabbage in August. They did in fact buy most vegetables more frequently than Christchurch grocers. The comparative figures for supermarkets in either centre are rather similar while Christchurch fruiterers bought most vegetables listed more frequently than Auckland fruiterers.

Table 7 shows the numbers from groups in either centre who had their own cool storage facilities.

This shows that all Auckland retailer groups were better equipped with cool storage than their Christchurch counterparts. Some Auckland retailers even had cooled display cabinets.

It is also noteworthy that in both Christchurch and Auckland the retail outlets best equipped with cool storage bought vegetables most frequently.

8. PACKAGING AND STORAGE

Table 8 shows the numbers of each retail group in each centre who sometimes prepacked the listed vegetables.

The main conclusions to be drawn from this table are:

(i) That carrots and onions are in general the main vegetables prepacked but fewer Auckland fruiterers tend to stock these vegetables prepacked than Christchurch fruiterers.

TABLE 8

NUMBERS OF OUTLETS WITH VEGETABLES PREPACKED

Vegetable	Supermarkets		Fruiterers		Grocers		Central N.I.	Super F&V ChCh
	Auck.	ChCh	Auck.	ChCh	Auck.	ChCh		
Carrots	20	12	20	12	7	14	7	2
Celery	19	10	37	7	8	4	10	1
Cabbage	-	4	-	-	-	-	-	-
Tomatoes	4	6	-	-	-	1	-	-
Lettuce	-	2	-	-	-	-	-	-
Onions	20	11	25	13	7	16	11	2
Number in Group	20	12	40	14	16	22	14	3

(ii) Christchurch supermarkets stock a wider range of prepacked vegetables than Auckland supermarkets.

(iii) North Island retail outlets in general stocked prepacked celery more frequently than their Christchurch counterparts, celery being more readily available prepacked in the North Island.

(iv) A greater percentage of supermarkets than fruiterers, and a greater percentage of fruiterers than grocers, stocked prepacked vegetables in both Auckland and Christchurch.

For both centres carrots were packed mainly in 3 lb polythene packs and most retailers from all groups sold more carrots in prepacked form than loose. Also most retailers said they prepacked some carrots themselves, the percentages being higher for supermarkets than other groups.

Celery was prepacked singly in polythene bags. Supermarkets and grocers in Auckland, and supermarkets and fruiterers in Christchurch, said they sold more celery prepacked than loose. Few retailers in either centre did their own prepacking of celery.

The prepacking of cabbage, and lettuce in particular, was very limited, and all such preparation was done by retailers themselves. Cabbage were generally cut in half and either wrapped in cellophane, or in one case, in airtight packs. Lettuce which were prepacked were done in the same way generally, but as whole lettuces. Usually only hothouse lettuces were prepacked.

Prepacking of tomatoes was confined mainly to supermarkets who used polythene or netlon packs, the size of which varied with the level of prices, smaller packs being used at higher prices and conversely. Packaging was done by retailers themselves.

Onions were the most universally prepacked of vegetables in the survey and were packed in a wide variety of packs (including polythene, string bags, paper bags, and netlon), and a wide variety of sizes. A 3 lb polythene pack and 6-10 lb string packs were the most popular packs. All groups except Christchurch fruiterers said they sold more onions prepacked than loose.

The major conclusion to be made from answers to questions about advantages and disadvantages of prepacked vegetables was that prepacking in general needed more careful inspection and more careful rotation of stock and that sales of prepacks are more suited to retail outlets with faster stock turnovers, although some retailers have claimed that prepacking of vegetables has resulted in faster turnover.

The results of the question on storage are summarised in Table 9, which shows, from the techniques suggested to retailers, the single method which was most frequently used for overnight storage and maintenance of quality for each vegetable.

The greater use of cool storage by Auckland retailers shown in this table is a reflection of the greater number of Auckland retailers who possess cool storage, which has been indicated in Table 7.

TABLE 9

METHODS OF OVERNIGHT STORAGE OF VEGETABLES

	Christchurch						North Island					
	Carrots	Celery	Cabbage	Tomatoes	Lettuce	Onions	Carrots	Celery	Cabbage	Tomatoes	Lettuce	Onions
Sprinkle with water					*							
Immerse in water & drain												
Leave in water overnight		*										
Put in cool store overnight								*			*	
Put in another cool place												
Leave where displayed	*		*	*		*	*		*	*		*

9. MARGINS AND MARKUP POLICY

The major part of the questionnaire was concerned with margins on vegetables and how these are calculated. This section was handled more comprehensively in Auckland than in Christchurch. Margins were looked at quantitatively in two main respects. Initially each retailer was asked what overall percentage margin (on retail price) he achieved on vegetables in general, after allowing for losses. The results averaged for each retail group in each centre are summarised in Table 10.

TABLE 10

AVERAGE PERCENTAGE MARGINS QUOTED IN REPLIES

Supermarkets in Auckland	29.0
Supermarkets in Christchurch	33.3
Fruiterers in Auckland	25.9
Fruiterers in Christchurch	30.0
Grocers in Auckland	26.1
Grocers in Christchurch	29.1
Central North Island	27.2
Super F. & V. Christchurch	25.0

All the Auckland retail outlets had lower figures than their Christchurch counterparts. Highest figures for either centre were quoted by supermarkets. In Christchurch lowest percentages were quoted by Super F. & V. retailers but the lowest figures quoted apart from this were grocers, while the lowest Auckland figures were for fruiterers. Other work has shown that auction to retail margins in Christchurch are among the highest in the country, yet percentages achieved by the major retail outlet type in Christchurch (grocers) are among the lowest. The explanation is probably associated with the fact that this group is supplied mainly by 'commission' buyers and that percentages are calculated on prices charged by 'commission' buyers, who obviously are not strictly commission buyers at all, as most buy at auction and resell to retailers. Another explanation could be that grocers suffer greater losses.

The other quantitative approach to retail margins was to quote retailers interviewed, two typical (for that time of year) wholesale prices for each survey vegetable, and ask what retail price they would charge at these wholesale prices. The percentage margins (with percentages considered on a wholesale price basis) were much higher than the average figures quoted, some being considerably greater than 100%, especially at the lower wholesale price and especially for the lower priced items (e.g. carrots and onions where 100% markup may not be covering costs). Percentage margins in this form over a narrow range of vegetables showed small differences between retail outlets, but for Auckland, fruiterers appeared to be highest and grocers lowest. Comparison between centres was made difficult by the different wholesale prices used for each centre. This approach to margins did however provide useful information on the type of margin involved.

In nearly all cases the size of the percentage margin was greater when the lower wholesale price was quoted indicating that the margin in absolute terms (cents per pound or per unit) tended to be fixed. This was verified by inspection of the absolute margin which showed little variation between the high and the low retail price, being only slightly greater at the higher wholesale price. It was obvious from this data also that retailers tend to have greater absolute margins on the higher priced items. Thus tomatoes, with the highest unit wholesale prices, had the highest absolute margins quoted, and carrots and onions the lowest.

Retailers were asked whether or not they used percentage markup techniques, or used the same absolute margin or neither of these. In Christchurch about 8% of the sample said they used percentage margins and the balance said they used neither percentage nor fixed margins. In

Auckland however about 13% of all retailers said they put a given percentage on top of wholesale price, the percentages for grocers especially, and supermarkets, being higher than this. Auckland margins would then tend to be more flexible than Christchurch margins.

It is notable that retailers in both centres do not consider they apply fixed margins, but analysis from quoted wholesale prices shows considerable fixity of margins for all six vegetables. It is clear then that while retailers do not think in terms of fixed margins their markup procedure results in fixed margins, at least over the range of wholesale prices considered in the survey.

A number of questions were asked on what causes margins to change, and in which direction these changes are. Thus almost all retailers in Christchurch and Auckland said they made less in absolute terms (cents per pound) when produce was bought at high prices. The term "high prices" was not rigorously defined but it was felt that retailers took it to mean prices high compared with other retailers for the same vegetable, or prices high enough for customers to resist purchasing altogether, and/or substitute some other vegetable.

Smaller margins at high buying prices could indicate that maximum selling prices exist. Most retailers agreed that this was so in a hypothetical sense at least, but found it less easy to quote such prices for that point in time, especially for carrots and onions, these vegetables being more easily stored than the others in the survey, and probably needing greater changes in price to affect quantities sold. In general the fruiterer group tended to think in terms of maximum selling prices more than either the grocer group or supermarkets. As indicated below, fruiterers also tend to maintain some purchases of each survey vegetable to provide a complete range to customers, and therefore probably accept considerably lower margins at such times.

Retailers were asked, where they quoted selling price maxima, if they would buy in vegetables at greater than this maximum selling price, just to have stocks of each of the survey vegetables. It was clear that such a situation rarely occurred, but the answers to this question indicated that in general fruiterers in each centre would be most willing to do so and grocers least willing. Retailers in general were least willing to do this for celery and most willing to do it for carrots, onions and cabbage. Percentages of retailers from different groups who said they changed their selling prices for the survey vegetables every time their buying prices changed, are shown in Table 11.

Auckland retailers from each group are clearly more inclined to calculate a new selling price with each new lot of produce than Christchurch retailers, indicating once again that their margins are more flexible. In both centres the grocer/dairy group change selling prices most frequently. Next in Auckland come supermarkets, while fruiterers change least frequently, the pattern being roughly similar for Christchurch retail groups.

TABLE 11

FREQUENCY OF ADJUSTMENT OF SELLING PRICES TO BUYING PRICES
(percentage of outlets who adjust for every price change)

Vegetable	Supermarkets		Fruiterers		Grocers		Central N.I.	Super F&V ChCh
	Auck.	ChCh	Auck.	ChCh	Auck.	ChCh		
Carrots	50.0	0	36.6	7.1	64.2	33.3	57.1	33.3
Celery	85.0	58.3	75.0	57.1	100.0	88.2	100.0	33.3
Cabbage	85.0	50.0	65.0	57.1	92.3	68.4	69.2	33.3
Tomatoes	85.0	66.6	82.5	64.3	100.0	94.4	100.0	66.6
Lettuce	85.0	58.3	80.0	64.3	91.7	83.3	92.3	66.6
Onions	45.0	0	37.5	0	64.3	31.8	57.1	33.3
Number in group	20	12	40	14	16	22	14	3

The maximum selling prices quoted for Christchurch and Auckland were cross tabulated with the location of the retailer within the city. The pattern for Christchurch was clear. A gradient was apparent from higher priced city areas, to suburban shopping centres, to suburban districts (the corner store). In Auckland the situation was less clear cut but in general lowest maximum price levels were once again in suburban districts but the next lowest appeared to be in Auckland City while borough and suburban shopping centres appeared to have the highest maximum price levels. The reasons for these gradients are uncertain.

Throughout the survey in Auckland, prices being charged for the survey vegetables were recorded and averaged for each retail outlet. Although prices of the survey vegetables changed over the survey, interviews for different retail outlets were well spaced out over time and a comparison of retail outlets is not invalid. The current prices analysis showed that the highest prices were being charged by fruiterers and the lowest by supermarkets. Earlier analysis for the same range of vegetables (where wholesale prices were given) showed margins to be greatest for fruiterers and smallest for grocers. Thus for Auckland, fruiterers appear to have the greatest margins and charge the highest retail prices. However, grocers had lower margins than supermarkets but still charged higher prices. This can only mean that grocers must be less competitive buyers than supermarkets in Auckland.

For Auckland price elasticities of demand for the vegetables in the survey were calculated. This was done from the section where relevant retail prices were asked, for two wholesale prices, for each survey vegetable. Retailers were also asked to estimate what quantities they would sell in a week at these retail prices under current demand conditions. This data, averaged for each group and Auckland in general, gave two points on a demand curve for that time of the year, from which price elasticities of demand (P.E.D.) shown in Table 12 were estimated.

TABLE 12

ESTIMATED PRICE ELASTICITIES

Vegetable	S/markets (P.E.D.)	Fruiterers (P.E.D.)	Grocers (P.E.D.)	All Auck. (P.E.D.)	Cent. N.I. (P.E.D.)
Carrots	-0.84	-0.55	-0.42	-0.76	-0.08
Celery	-1.21	-0.87	-0.36	-1.11	-0.33
Cabbage	-0.74	-0.44	-0.33	-0.65	-0.34
Tomatoes	-2.07	-1.62	-2.13	-1.93	-1.04
Lettuce	-0.58	-0.55	-0.93	-0.58	-0.63
Onions	-0.56	-0.57	-0.44	-0.56	-0.21

This shows that supermarkets tend to face the most elastic demand curves for most of these vegetables over the range of prices quoted, and grocers in general have the least elastic demand curves except for tomatoes and lettuce, while Central North Island figures are less elastic than those for Auckland. As might be expected tomatoes had higher elasticities than other vegetables, the figure of -1.93 indicating that a 1% increase in price will decrease sales by 1.93%. The Auckland figure for celery is also greater than one (elastic) while other vegetables tend to have inelastic demands.

The higher elasticities for supermarkets are an indication that supermarket shoppers are in general more price conscious than shoppers at other retail outlets, and those who shop at grocers less price conscious for vegetables, which helps explai grocers' ability to charge higher retail prices than supermarkets.

10. COSTS

The question of costs involved in retailing fruit and vegetables was attacked in two ways, in both Auckland and Christchurch. From a list of costs given in one question retailers were asked to rank the most significant.

Of the labour costs (considered separately), supermarkets in both centres regarded cost of preparation and display most important as did the grocers of both centres and Auckland fruiterers. Christchurch fruiterers considered time spent buying as more important.

Fruiterers of both centres and Christchurch supermarkets regarded overheads (excluding labour) as the most important of their other costs, while Auckland supermarkets considered these second most important to the costs of wrapping vegetables. Christchurch grocers considered losses through deterioration as their greatest cost while Auckland grocers regarded this as second to cartage costs. It should be noted here that Christchurch 'commission' buyers do their own deliveries to retailers, rather than arranging carriers to do this, and include cartage in the cost of the vegetables. Christchurch grocers do not then regard cartage as a cost at all. Overheads were defined in the survey as, overheads associated with vegetables, and include rent, power, telephone, insurance, management, maintenance and depreciation.

In addition to an indication of costs from all retailers in the survey, thirteen outlets were revisited in Auckland and Central North Island, and ten in Christchurch, in an attempt to quantify these costs, and in particular allocate them among survey vegetables, where these could not be directly assessed. The method of cost allocation was on the basis of the turnover of each vegetable relative to total fruit and vegetable turnover. This method has obvious limitations as it may not necessarily reflect the use of the resources by each of the survey vegetables. However, it is the method in most frequent use, as no better method is available. The limitations of this method will be minimised when used for comparative purposes, as is the present purpose. In addition, the correlation between the ranking answers above and the answers using this method help justify the use of this method.

The limitations of technique and other inadequacies, especially the possible inaccuracies in estimating the wastage and the direct labour costs for each vegetable, and the smallness of the sample, must be borne in mind when the results are interpreted.

The results showed that overhead costs were highest for supermarkets in both centres for all vegetables. The same costs were generally lowest for grocers.

Commission charges were relatively unimportant for all groups except grocers, while cartage was relatively unimportant for most outlets except for the Central North Island group whose cartage costs were between 20 and 40 cents per case or bag.

Prepacking costs were greatest for supermarkets in both centres, and were most significant for carrots and onions as might be expected.

Other wrapping costs were comparatively minor being greatest for carrots, tomatoes and onions. Other vegetables, and in many cases those mentioned, were wrapped in newspaper which reduced costs considerably, compared with alternative wrapping materials.

Deterioration losses were generally least for supermarkets in Auckland, and supermarkets and the super fruit and vegetable group in Christchurch. Grocers of both main centres had greatest deterioration losses but Central North Island retailers had greater deterioration costs than any other group, a reflection mainly of the diminished lasting qualities of vegetables after prolonged cartage. Auckland retailers suffered greatest losses through deterioration for tomatoes, and least for cabbage, carrots and onions, while Christchurch retailers claimed greatest losses for celery and least for lettuce, tomatoes and carrots. Christchurch losses were generally lower than Auckland deterioration losses.

Supermarkets in both areas had the lowest labour costs for individual vegetables and grocers the highest.

In spite of the inadequacies of the technique used, the unit costs of handling of each vegetable for each retail outlet were computed and are shown in Table 13.

The pattern is reasonably clear over these vegetables. Apart from the single F. & V. retailer whose general level of <u>unit costs</u> was lowest for Christchurch, supermarkets of both centres showed lowest <u>unit costs</u>, fruiterers being next and grocers third (remembering that there was only one grocer in Auckland) while the Central N.I. group was generally the highest.

TABLE 13

VEGETABLE HANDLING COSTS

Vegetable	(Units)	Supermarkets Auck.	Supermarkets ChCh	Fruiterers Auck.	Fruiterers ChCh	Grocers Auck.	Grocers ChCh	Cent. N.I.	Super F&V ChCh
Carrots	cts/lb	1.40	1.50	1.53	1.60	2.40	1.70	2.40	1.30
Celery	cts/stick	3.50	3.90	3.60	4.30	3.40	5.70	7.40	3.20
Cabbage	cts/each	3.00	5.00	3.95	3.30	4.00	4.50	7.00	3.30
Tomatoes	cts/lb	4.76	3.80	4.25	3.80	5.10	3.80	6.43	3.40
Lettuce	cts/each	2.95	2.50	3.15	2.60	2.60	3.20	3.36	2.40
Onions	cts/lb	1.93	2.10	2.00	1.70	2.40	1.90	3.00	1.60

This table also shows that Auckland supermarkets generally had lower unit costs than Christchurch supermarkets and Christchurch fruiterers generally had lower unit costs than Auckland fruiterers, the situation for grocers being indecisive. The single super fruit and vegetable retailer in Christchurch had lower unit costs than any other outlet.

Total costs for each enterprise revisited were also studied and related to total fruit and vegetable turnovers. In the North Island there was a strong indication of economies of scale for fruit and vegetable retailing. As turnovers became greater, total costs became a much less significant part of turnover, the ratio of total costs to turnover falling from 45.6 for the lowest turnovers, to 16.9 for the highest. This pattern was not clearly evident from Christchurch results where the cost/turnover ratio was clearly related to the level of estimated net profit. In Auckland this relationship was not evident.

Auckland results indicate that enterprises become more efficient at higher turnovers, while Christchurch results indicate that a given level of efficiency can be achieved equally at high or low turnovers. Thus the possible economies of scale evident from Auckland are not being achieved in Christchurch. More extensive research verifying this fact and seeking to explain it, would no doubt be profitable as there would appear to be considerable opportunity for increasing efficiency of retailing outlets in Christchurch.

11. SPECIALLING AND COMPETITION

Retailers were asked a number of general questions with regard to their specialling policies. Answers indicated that supermarkets in both centres sold vegetables as 'specials' more frequently than other groups, although the super fruit and vegetable group in Christchurch specialled vegetables as often as these retailers. Fruiterers in both centres indicated that they specialled more vegetables more frequently than grocers. The latter two groups indicated that their specials were more in response to buying prices and less predetermined than supermarkets who generally decided upon specials and advertised these before the vegetables were bought.

The vegetables most frequently specialled by each retail group in Christchurch were: carrots, cabbage, onions, potatoes, pumpkins, cauliflower, swedes, lettuce and tomatoes. The pattern was roughly similar for Auckland but here there was an obvious variation between retail groups. For supermarkets and grocers the more durable vegetables like carrots, onions and potatoes were most popular, although cabbages were also very popular. Auckland fruiterers favoured more perishable vegetables for specialling, the main ones being cabbage, lettuce and cauliflower. It is notable that the vegetables favoured by Auckland's supermarkets for specialling were the more price-stable vegetables, either because of their durability or because of their availability direct from the grower (cabbage and carrots). This stability of buying price enables prior advertising of these vegetables at prices maintained over a specified period.

Christchurch supermarkets special more perishable vegetables as well as more durable vegetables and also advertise these at predetermined prices for predetermined periods. In Christchurch few vegetables are bought from the grower and the question may well be asked whether or not Christchurch supermarkets get continuous supplies of these vegetables at stable prices. If they do not they must bear the risk of buying prices exceeding their selling prices, in which case the vegetables concerned would effectively become "loss leaders". On the other hand, if they do, then predictable buying prices must be available through the "auction" system.

Retailers were also asked a series of questions on how they kept themselves aware of other retail prices, and which groups they regarded as their most important competitors. About one third of retailers from all groups said they were not generally aware of prices being charged by other retailers. Of the balance who were generally aware of other retailers' prices, supermarkets in both centres said they did this mainly by reading or listening to advertisements, although Auckland supermarkets regarded watching shop windows as equally important. This was also the favoured method of Auckland fruiterers, while Christchurch fruiterers regarded "talking to other retailers at markets" as their most important source of information. Auckland grocers, like other Auckland groups, kept themselves informed of prices by watching shop windows, while Christchurch grocers were supplied with price information by their buyers.

Asked which group of retailers they regarded as their most important competitor, all groups but one, for all regions, considered supermarkets had this quality. This also included supermarkets themselves, and the same pattern emerged when retailers were asked what category of retailer, who was not their nearest fruit and vegetable retailer, they regarded as being their most important competitor. The one exception was the super fruit and vegetable retailer group in Christchurch who regarded growers selling at the gate as their most important competitor.

12. QUALITY, DISPLAY AND PRESENTATION

North Island retailers were asked directly if they had any overall preferences for quality. The answers to this question did not show any significant differences between groups, as might be expected. About half of each group specified only the very best quality and the balance were satisfied with something less than this in terms of quality, the answer frequently being that they chose quality with reference to price or supply.

These retailers were also asked if they bought, or asked for, each of the survey vegetables from particular growers. The grocer group and Central North Island group showed least discrimination between growers although it is possible that their buyers may do so without such specification. Fruiterers and supermarkets on the other hand showed marked preferences for growers. Supermarkets' strongest preferences were for carrots and cabbage, the vegetables they most frequently bought directly from growers, while fruiterers showed greatest preference for celery growers.

Throughout both the South Island and the North Island, observations were recorded of the positioning of fruit and vegetables displays within the shop, the positioning of the survey vegetables in displays, and how these vegetables were displayed. In addition each retailer's display was "scored" subjectively according to general overall impressions. Table 3 has shown that Auckland's supermarkets and fruiterers devoted considerably more space to fruit and vegetable displays than their Christchurch counterparts, while grocers from either centre devoted about equal areas to display.

Supermarkets in both centres displayed fruit and vegetables towards the back of the shop, although some Auckland supermarkets displayed some fruit and vegetables in the window. These were mainly specials. However, one variety store claimed a very sizeable increase in fruit and vegetable turnover by displaying these at the front of the shop. This may of course have meant a fall-off in other turnover. It is also notable that this retailer provided no parking facilities and presumably relied, to some extent, on attracting customers from the street.

Supermarkets also claimed that size of display was a most significant merchandising technique. Vegetables which were "specialled" in particular, frequently had massive displays to back up their advertising. Supermarkets generally used one tier displays along walls and "dump" tables away from walls. The use of "dump" tables was more characteristic of Christchurch supermarkets than Auckland supermarkets. Supermarket displays were rarely "on the floor" or "outside the shop".

This was in contrast with fruiterers, especially Christchurch fruiterers where floor displays were evident for about 30% of the sample and displays outside the shop for about 50%. Only about 10% of Auckland's fruiterers had displays outside although many Auckland fruit shops were open fronted. This was rarely so for Christchurch shops. There may be a climatic factor involved here. Both Auckland and Christchurch fruiterers displayed extensively in the shop window but window displays were confined mainly to fruit, the only vegetable significantly displayed in the shop window being tomatoes.

Grocers of both centres frequently displayed vegetables on the floor, although their main method of display was generally a small shelved display stand. The floor displays were significant mainly for grocers of both centres and Christchurch fruiterers. These displays were generally in apple cases or banana cases and unattractive.

Much of the foregoing can be summarised in Table 14, which shows the average subjective rank of display for retail outlets in both survey areas, a higher score indicating a generally more impressive display.

TABLE 14

RANK OF DISPLAY

	Auckland	Christchurch
Supermarkets	3.73	3.75
Fruiterers	3.69	3.71
Grocers	1.94	2.27
Central N.I.	2.57	-
Super F. & V.	-	3.25

This ranking shows little difference between supermarkets and fruiterers of each centre but shows Christchurch grocers to be better organised in fruit and vegetable displays than their Auckland counterparts. These rankings differ from the above discussion mainly in terms of the quality and condition of the produce on display.

13. RETAILERS' SUGGESTIONS

Each retailer was asked what improvement he would like to see in the marketing of fruit and vegetables in general.

In the North Island about one third of the retailers showed some measure of dissatisfaction with the Apple and Pear Boards' marketing policies. In Christchurch this figure was 49%. The major suggestion made in this respect was that retailers should be allowed to buy apples and pears direct from growers, although there was also considerable dissatisfaction with the quality of stored apples from the Apple and Pear Board. In Auckland 67.0% and in Christchurch 79.7% of retailers in the survey made some suggestion with regard to packaging and presentation of vegetables by growers. The major source of grievance in this respect was that poor quality vegetables were packed at the bottom of cases where they could not easily be inspected prior to purchase. Other suggestions in this respect involved labelling of weights, quantities, and grower's name on cases. In addition a number of specific suggestions were made with respect to particular vegetables, especially cauliflower.

Complaints about supply and quality of overseas fruit were less significant than those mentioned and complaints about the wholesalers were mainly with reference to charges made on containers and the quality of these containers.

14. SUMMARY AND CONCLUSIONS

The survey showed that the structure of fruit and vegetable retailing is very different between Auckland and Christchurch. The retail group which is most important in terms of wholesale purchases in Auckland is the fruiterer group while the most important group in Christchurch is the grocer-dairy group. In addition, the characteristics of the fruiterer group in Christchurch are different from Auckland fruiterers, the latter doing insignificant business in non-fruit and vegetables, while the former frequently did more than half of their business in non-fruit and vegetables. This meant that the fruit and vegetable turnover figures for Christchurch fruiterers were only about two thirds that of their Auckland counterparts. Christchurch supermarkets' fruit and vegetable business was also much less than Auckland supermarkets on the average for this group, while the turnover of grocers for each centre was comparable. This means that the bulk of the fruit and vegetable retail business in Christchurch is done by outlets with low fruit and vegetable turnovers by comparison with Auckland.

From this basic structural difference (where Christchurch retailing is dominated by the grocer-dairy group) between the two centres we can make a number of important inferences:

(i) Christchurch consumers in general have a poorer range of vegetables available to them at any one time, and are more likely not to be able to get supplies of any particular vegetable from one day to the next.

(ii) Grocers in both centres get supplies of vegetables less frequently than other retail groups and Christchurch consumers are more likely to have "less fresh" supplies of vegetables available than Auckland consumers. In addition grocers are less well equipped with cool storage than any other group. So not only do Christchurch consumers in general get supplies less frequently but they have these supplies less well stored than Auckland consumers. This is evidenced by the fact that deterioration losses were more significant for grocers than any other group.

(iii) Grocers in Christchurch had the highest estimated unit costs in handling vegetables but had almost the lowest average gross retail margin for Christchurch (ignoring costs). This is not to say that their retail prices were lower than other groups, however, as it appears that their buying costs are higher than other retail outlets. (Most Christchurch grocers get produce from a group who buy at auction and sell to these retailers.) Evidence of this is provided by other work which shows Christchurch auction to retail margins to be considerably higher than Auckland where the grocer's share of the retail fruit and vegetable business is small.

(iv) The subjective ranking of retailers' displays with special reference to produce quality and condition, showed grocers in both centres to compare unfavourably with other retail groups. Thus, the dominance of the grocer group in Christchurch means that in general Christchurch consumers are offered poorer quality vegetables, indifferently displayed.

(v) Christchurch consumers do however have a greater number of fruit and vegetable retail outlets available to them and have greater opportunity to do all their shopping at one store than Auckland consumers.

In addition to the basic structural differences between the two centres described above, a number of more general but still significant points arose from the survey.

In Auckland direct purchases from the grower were more significant than in Christchurch, especially for supermarkets. This was associated primarily with one large scale, well organised grower. Also associated with this perhaps, is the fact that supplies of overseas fruit to Auckland are more regular than to Christchurch and the penalty in terms of overseas fruit sacrificed by avoidance of the auction system is insignificant in Auckland compared to Christchurch.

The use of commission buyers in Auckland by groups other than grocers is more significant than in Christchurch, although it appears that the number of these buyers operating in Auckland may be fewer than in Christchurch and that these buyers are better equipped to take advantage of buying opportunities than their Christchurch counterparts. In Auckland these people act mainly on a true commission basis or at a flat rate. The advantages that accrue from use of commission buyers would seem to be greater in Auckland, as supermarkets and fruiterers find it worthwhile to use their services.

Auckland supermarkets have as "specials" mainly the more durable vegetables and vegetables bought directly from the grower (carrots and cabbage). These vegetables can be advertised for a specified period at predetermined prices. In Christchurch similar advertising occurs for a wide range of vegetables including perishable vegetables. To allow this either the auction system must provide sufficient stability, or greater risks may be taken by Christchurch supermarkets in pre-advertising specials.

Retail percentages achieved by all Auckland retail groups were smaller than comparable Christchurch groups. These were highest for supermarkets in either centre and lowest for fruiterers in Auckland, and for the super fruit and vegetable retailers in Christchurch. By comparison the unit costs calculated proved to be lowest for supermarkets in either centre (although the single super fruit and vegetable retailer in Christchurch had lower unit costs than Christchurch supermarkets). This would indicate that supermarkets achieved greater unit profits for fruit and vegetables than other groups.

Analysis of prices recorded during the Auckland survey showed however that Auckland supermarkets were able to achieve these profits by selling vegetables at the lowest average retail prices for any group. Thus we have the situation where Auckland's supermarkets can achieve the greatest retail percentages, on all the survey vegetables, at the lowest prices. The best explanation of this would be that these retailers are able to buy produce cheaper than other retail groups. A less plausible explanation would be that non-survey vegetables are sold at considerably greater prices than other groups. Comparison of retail margins, where retail prices were recorded given a pair of fixed buying prices, showed supermarket margins for the survey vegetables to be greater than grocers' margins for these vegetables. This tends to confirm the former explanation.

The survey of costs showed that economies of scale exist for fruit and vegetable retailing in Auckland. But for Christchurch the relative importance of costs did not appear to diminish with greater fruit and vegetable turnover. Further research into the reasons for this would appear to be desirable.

The inclusion of the two Central North Island towns in the survey showed that retailing distant from market centres had a number of characteristic features. Among these were the diversity of supply sources used in terms of the type of source,and the geographical position of the source. Another characteristic was the high level of costs which these retailers have, particularly cartage costs. Taumaranui, with fruiterers selling little else but fruit and vegetables was different from Taihape, where the fruiterer business was much more diverse in nature.

This report has thus described the main points emerging from the survey. In particular it has described the nature of the retail margin for different retail groups in different centres, and at the same time has related this to other services provided by different retail groups, and to other characteristic features of different retail groups. This and other information with regard to costs in particular, has given an indication of the relative efficiency of different retail outlets. It has also given an indication of which types of outlet can sustain lower selling prices and could therefore be encouraged in order to sell increasing quantities of the survey vegetables and perhaps of vegetables in general.

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